REMARKS

Claims 41 and 42 have been amended. The Specification has been amended. Claims 48-54 have been cancelled. Claims 41-47 remain in the application. Further examination and reconsideration of the application, as amended, is hereby requested.

In Section 3 of the Office Action, the Examiner objected to the drawings because in Fig. 2 the reference character 36 was not described in the specification. Applicants have amended the specification to include the reference character 36 to bring the specification and drawings into congruence. No new matter has been entered. As shown in Fig. 2, the "lens 28, exemplified as an aperture in a conductor that is set at predetermined voltage 36 that can be adjusted to change the focusing effect of the lens 28." Withdrawal of this objection is respectfully requested.

In Section 5 of the Office Action, the Examiner rejected claims 41 and 43-46 under 35 USC 102(e) as being anticipated by Raina et al. Applicants respectfully traverse this rejection as Raina clearly does not disclose Applicants' invention. Applicants are clearly claiming that the parallel sidewalls are "interfacing" to the *emitting surface* as shown in Fig. 11L. Raina does not interface to the emitting surface but the bottom of the electron tip 64. The emitting surface of Raina is the apex of electron tip 64 as shown in Fig. 8 which is disposed inbetween the sidewalls in the second chamber and is clearly the tip emitting surface is not interfaced to the sidewalls. In addition, Raina has somewhat "substantially parallel" sidewalls that are not interfacing to the emitting surface but are instead interfacing to gate electrode 74 in the second chamber. Indeed, the sidewalls of Raina become increasingly *non-parallel* when they come close to interfacing with the electron emitter 64 in the first chamber. In fact, the sidewalls of Raina do not interface to the *emitting surface* as Applicants claim.

However, Applicants have amended claim 41 to more particularly define and distinguish their invention over that disclosed in Raina. Applicants are now claiming "a flat emitter" whereas Raina discloses a tip emitter 64. Consequently, Raina discloses *a pointed* (not flat) emitting surface having a first area and a

second (not first) chamber having substantially parallel sidewalls *not* interfacing to the emitting surface and the second chamber interfacing to a first chamber *that interfaces to the bottom of an electron tip emitter* and the second chamber having sidewalls diverging to an opening having a second area larger than the first area. In other words, Raina does not disclose, teach, or suggest Applicants claim 41, as amended and thus does not anticipate it.

Further to more clearly define Applicants claimed invention, Applicants have amended claim 41 to include limitations from claim 42 such as "a cathode layer disposed on *both the emitting surface and sidewalls* of the first and second chambers." Raina does not disclose this additional layer but rather only discloses the electron tip 64 and gate electrode 74 as being electrically isolated. In fact, modifying Raina to include a cathode layer that is disposed on the electron tip 64 and the sidewalls of the first and second chambers would cause the electron tip 64 and gate electrode 74 to short. This shorting would cause Raina to no longer work for its intended purpose. For instance, Raina states at col. 8, lines 56-60 that "the electrical gradient between cathode conductive layer 56 and gate electrode 74 is sufficient to induce emission of electrons from the apex of electron emission tip 64. Cathode conductive layer is electrically connected to electron emission tip 64 via resistive layer 60 and buffer layer 58. The typical voltage separation for Raina for the tip 64 and gate electrode 74 is about 60-90 volts (col. 8:62-63). Accordingly, shorting the electron tip 64 to the gate electrode 74 would make Raina inoperative for its intended purpose and one of ordinary skill in the art would not be motivated to modify Raina as Applicant claims.

Applicants believe that claim 41, as amended, is now clearly unanticipated and patentable over the art made of record and withdrawal of the rejection under 35 USC 102(e) is respectfully requested. Claims 43-46 depend upon claim 41 and thus are believed patentable based at least on the patentability of claim 41.

In Section 7 of the Office Action, the Examiner rejected claim 42 under 35 USC 102(e) as being anticipated by or in the alternative under 35 USC 103(a) as being obvious over Raina et al. As mentioned above, part of claim 42 has been incorporated in to claim 41, that is, the cathode layer disposed on both the emitting surface and the sidewalls of the first and second chambers. This limitation was not present in Raina and thus the rejection was inappropriate.

Applicants have amended claim 42 to no longer include this limitation but have kept the additional limitation of "wherein the emitter has been subjected to an annealing process thereby increasing the emission capability of the emitter." Claim 42, as amended, depends upon claim 41 and thus is believed patentable at least based on the patentability of claim 41, as amended.

In Section 8 of the Office Action, the Examiner rejected claim 47 under 35 USC 103(a) as being unpatentable over Raina et al. in view of Applicants' prior art. Claim 47 is dependent upon claim 41 and is believed patentable based at least on the patentability of claim 41, as amended.

Applicants believe their claims as amended are patentable over the art of record, and that the amendments made herein are within the scope of a search properly conducted under the provisions of MPEP 904.02. Accordingly, claims 41-47 are deemed to be in condition for allowance, and such allowance is respectfully requested.

If for any reason the Examiner finds the Application other than in a condition for allowance, the Examiner is respectfully requested to call Applicants' undersigned representative at the number listed below to discuss the steps necessary for placing the application in condition for allowance.

The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 08-2025. Should such fees be associated with an extension of time, Applicants respectfully request that this paper be considered a petition therefore.

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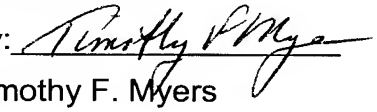
By: 
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